

ABSTRACT:

The invention in the simplest form is a method and apparatus for reliably protecting against island situations with one or multiple power sources connected to an electric distribution grid. The method and apparatus detects variations in the voltage and frequency of the grid. An observed change in grid voltage causes a change in output power that is sufficient to cause an even larger change in grid voltage when the utility AC power source is disconnected. An observed change in grid frequency causes a change in phase or reactive output power that is sufficient to cause an even larger change in grid frequency. If several shifts in voltage or frequency happen in the same direction, the response to the change is increased in an accelerating manner.